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Fact Sheet

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Frequently Asked Questions About Potassium Iodide

What is potassium iodide?

Potassium iodide is a salt, similar to table salt. Its chemical symbol is KI. It is routinely added to table salt to make it "iodized." Potassium iodide, if taken in time and at the appropriate dosage, blocks the thyroid gland's uptake of radioactive iodine and thus, could reduce the risk of thyroid cancers and other diseases that might otherwise be caused by exposure to radioactive iodine that could be dispersed in a severe nuclear accident.

What is the role of potassium iodide in radiological emergency preparedness?

The purpose of radiological emergency preparedness is to protect people from the effects of radiation exposure after an accident at a nuclear power plant. Evacuation is the most effective protective measure in the event of a radiological emergency because it protects the whole body (including the thyroid gland and other organs) from all radionuclides and all exposure pathways. However, in situations when evacuation is not feasible and in-place sheltering is substituted as an effective protective action, administering potassium iodide is a reasonable, prudent and inexpensive supplement to evacuation and sheltering.

Potassium iodide is a special kind of protective measure in that it offers very specialized protection. Potassium iodide protects the thyroid gland against internal uptake of radioiodines that might be released in the unlikely event of a nuclear reactor accident.

What are the benefits of taking potassium iodide during a radiological accident?

When ingested, potassium iodide is taken up by the thyroid gland. In the proper dosage, and taken at the appropriate time, it will effectively saturate the thyroid gland in such a way that inhaled or ingested radioactive iodine will not be accumulated in the thyroid gland. The risk of thyroid effects is reduced. Radioiodine uptakes due to inhalation or ingestion, or both, could result in acute, chronic and delayed effects. Acute effects from high doses include thyroiditis, while chronic and delayed effects include hypothyroidism, thyroid nodules and thyroid cancer.

Are America's nuclear reactors less safe?

The present generation of nuclear power plants are not less safe than previously thought. On the contrary, present indications are that nuclear power plant safety has significantly improved since the existing current emergency preparedness requirements became effective after the Three Mile Island-2 accident in 1979.

What are the recommended dosages of potassium iodide?

The FDA is the federal agency responsible for decisions about appropriate thresholds and dosages for use of potassium iodide. The FDA published guidelines on the use of potassium iodide and included revised dosages and intervention levels, "Potassium Iodide as a Thyroid Blocking Agent in Radiation Emergencies." Visit their Web site at www.fda.gov/cder/guidance/4825fnl.htm

Can individual members of the public obtain potassium iodide?

The FDA has approved potassium iodide as an over-the-counter medication. As with any medication, individuals should check with their doctor or pharmacist before using it.

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